

Encryption Tool - Hacker Style

This program provides a graphical interface for encrypting and decrypting messages using RSA cryptography. Built with Python and tkinter, it offers functionalities like RSA key generation, encryption, and decryption in a hacker-inspired black-and-green aesthetic.

Features

- 1. RSA Key Pair Generation:**
 - a. Generate a private/public key pair.
 - b. Save keys in PEM format.
- 2. Message Encryption:**
 - a. Encrypt plaintext using a public key.
 - b. Display encrypted messages in a user-friendly interface.
- 3. Message Decryption:**
 - a. Decrypt messages using the corresponding private key.
 - b. View the original plaintext.
- 4. GUI Features:**
 - a. A visually engaging hacker-style interface.
 - b. Right-click menus for copy/paste actions in all text fields.
 - c. Clipboard functionality for copying encrypted text.

How to Use

Requirements

Ensure the following are installed on your system:

- Python 3.8 or higher
- Required Python packages (install via pip):

bash

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```
pip install cryptography
```

Running the Program

1. Save the program code to a file named `encryption_tool.py`.
2. Run the file:

```
bash
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python encryption_tool.py
```

User Guide

1. **Generate Keys:**
 - a. Click the **Generate Keys** button.
 - b. Save the private and public keys to secure locations.
2. **Encrypt a Message:**
 - a. Type the plaintext message in the "Enter Message" box.
 - b. Click **Encrypt** and select the public key file.
 - c. The encrypted message will appear in the "Encrypted Message" box.
 - d. To copy the encrypted text, click **Select and Copy Encrypted Text**.
3. **Decrypt a Message:**
 - a. Paste the encrypted message in the "Encrypted Message" box.
 - b. Click **Decrypt** and select the private key file.
 - c. The original plaintext will appear in the "Decrypted Message" box.

File Descriptions

- `encryption_tool.py`: The main program file.

Known Issues and Limitations

- **Key Security:** Always store private keys securely to prevent unauthorized access.
- **Plaintext Size:** RSA encryption is limited to small amounts of data. For large files, consider hybrid encryption techniques.

- **No Password Protection:** Private key loading does not support password protection.

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Contribution

Feel free to submit pull requests or issues if you encounter bugs or have ideas for improvements.

Acknowledgments

This program uses the following libraries:

- [cryptography](#)
- Python's built-in `tkinter` for the graphical interface.

For questions or support, please contact d.ynacay326@gmail.com